

Tables for:
GnRH Agonists, Antagonists, and Assisted Conception

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Table 1. Structural Formulae of Native GnRH and GnRH Analogues

Name	Amino Acid Sequence									
	1 pGlu	2 His	3 Trp	4 Ser	5 Tyr	6 Gly	7 Leu	8 Arg	9 Pro	10 Gly-NH ₂
Human GnRH										
GnRH-I	1	2	3	4	5	6	7	8	9	10
GnRH-II	1	2	3	4	His	6	Trp	Tyr	9	10
GnRH III	1	2	3	4	5	6	Trp	Leu	9	10
GnRH agonist										
Nonapeptides										
Leuprorelin	1	2	3	4	5	d-Leu	7	8	9-	N-Et-NH ₂
Buserelin	1	2	3	4	5	d-Ser(Bu ¹)	7	8	9-	N-Et-NH ₂
Goserelin	1	2	3	4	5	d-Ser(Bu ¹)	7	8	9-	AzaGly-NH ₂
Histrelin	1	2	3	4	5	d-His(ImbzI)	7	8	9-	N-Et-NH ₂
Deslorelin	1	2	3	4	5	d-Trp	7	8	9-	N-Et-NH ₂
Decapeptides										
Nafarelin	1	2	3	4	5	(d-Nal) ₂	7	8	9	Gly-NH ₂
Triptorelin	1	2	3	4	5	d-Trp	7	8	9	Gly-NH ₂
GnRH antagonist										
Abarelix	D-Ala	D-Phe	D-Ala	4	5	D-Asp	7	Lys(iPr)	9	D-Ala
Antarelix	D-Nal	D-Phe	D-Pal	4	Phe	D-Hcit	7	Lys(iPr)	9	D-Ala
Cetrorelix	D-Nal	D-Phe	D-Pal	4	5	D-Cit	7	8	9	D-Ala
Ganirelix	D-Nal	D-Phe	D-Pal	4	5	D-hArg	7	HArg	9	D-Ala
Iturelix (Antide)	D-Nal	D-Phe	D-Pal	4	NicLys	D-NicLys	7	Lys(iPr)	9	D-Ala
Nal-Glu	D-Nal	D-Phe	D-Pal	4	D-Glu	D-Glu	7	8	9	D-Ala

*Third-generation GnRH-antagonists as used in clinical trials.

Table 2. GnRH Agonists and Antagonist Administration Policy in ART

GnRH Analogue	Trade	Administration	Recommended	Minimal Effective	Indications: ART
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Genetic Name	Name	Route	Dose	Dose	Yes/No
GnRH agonist					
Nonapeptides					
Leuprorelin	Lupron	S.C.	500-1000 mcg/d	?	yes
	Enantone	I.M. depot	3.75-7.5 mg/mo	?	yes
Buserelin	Suprafact	S.C.	100-500 mcg/d		yes
	Suprecur	I.N.	300-400, 3-4 times daily		yes
Goserelin	Zoladex	S.C. implant	3.6 mg/mo	?	seldom
Histrelin	Supprelin	S.C.	100 mcg/d	?	no
Decapeptides					
Nafarelin	Synarel	I.N.	200-400 mcg 2/d	?	yes
Triptorelin	Decapeptyl	S.C.	100-500 mcg/d	50 mcg/d	yes
		I.M. depot	3.75 mg/mo	?	no
GnRH antagonist					
Cetrotide	Cetrorelix	S.C.	single dose	2 mg/injection	yes
		S.C.	multiple dose	0.25 mg/d	yes
Orgalutran	Ganirelix	S.C.	multiple dose	0.25 mg/d	yes

S.C., subcutaneous; I.N., intranasal; I.M., intramuscular.